

Date: Thursday, 31/07/2008 12:18:19 PM  
 User: Julie Lecocq

## Process Sheet

Customer : CU-DAR001 Dart Helicopters Services  
 Job Number : 40856  
 Estimate Number : 13032  
 P.O. Number :  
 This Issue : 31/07/2008 S.O. No. :  
 Prsht Rev. : NC  
 First Issue : / / Type : SMALL /MED FAB  
 Previous Run : 39935  
 Drawing Name : FLANGE ASSY  
 Part Number : D3651043  
 Drawing Number : D3651 REV.B  
 Project Number : N/A  
 Drawing Revision : B  
 Material :  
 Due Date : 07/08/2008 Qty: Um: Each  
 Written By :  
 Checked & Approved By :  
 Comment : Est Rev:A New Issue 07-09-27 DD verified by: EC  
 Est Rev:B ECN 1113P 08-01-22 DD  
 Est Rev:C ecn1162 08-04-02 DD verified by: EC

## Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 M304S26GA 304/316 0.018 SHEET



Comment: Qty.: 0.2573 sf(s)/Unit Total : 1.0290 sf(s)  
 304/316 SS sheet 26 ga (0.018" thick)  
 Batch: 108415 HB 8-8-13

(FOR D3651-7)

2.0 WATER JET FLOW WATER JET



Comment: FLOW WATER JET

1-Cut as per Dwg D3651 (D3651-7)

Dwg Rev: B HB 8-8-13

Prog Rev: B

2-Deburr if necessary  
 IDENTIFY AS D3651-7

HB 8-8-13

⑥

3.0 QC2 INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

4.0 QC8 SECOND CHECK



Comment: SECOND CHECK

S 08/08/13 @6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 31/07/2008 12:18:19 PM  
User: Julie Lecocq

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FLANGE ASSY

Job Number: 40856

Part Number: D3651043

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

M304S26GA

304/316 0.018 SHEET



Comment: Qty.: 0.2573 sf(s)/Unit Total: 1.0290 sf(s)

304/316 SS sheet 26 ga (0.018" thick)

Batch: 105591 HB 8-8-14

(FOR D3651-5)

6.0

WATER JET

FLOW WATER JET



Comment: FLOW WATER JET

1-Cut as per Dwg D3651 (D3651-5)

Dwg Rev: HB 8-8-14

Prog Rev: HB

2-Deburr if necessary

Identify as D3651-5

HB 8-8-14

(6)

7.0

QC2

INSPECT PARTS AS THEY COME OFF MACHINE



HB 8-8-14

Comment: INSPECT PARTS AS THEY COME OFF MACHINE

8.0

QC8

SECOND CHECK



Comment: SECOND CHECK

HB 8-8-14 (6)

9.0

BRAKE NC

NC BRAKE



Comment: NC BRAKE

Form D3651-5 and D3651-7 as per Dwg D3651

HB 08/09/24

(6)

10.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

HB 08/09/24 (6)

11.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

Weld assembly as per dwg D3651

HB 08-09-25

(6)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 31/07/2008 12:18:19 PM  
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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FLANGE ASS'Y

Job Number: 40856

Part Number: D3651043

Job Number:



Seq. #:	Machine Or Operation:	Description :
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12.0	QC9	VISUAL WELDING INSPECTION
------	-----	---------------------------



Comment: VISUAL WELDING INSPECTION

PD 08-09-25 (6)

13.0	QC5	INSPECT WORK TO CURRENT STEP
------	-----	------------------------------



Comment: INSPECT WORK TO CURRENT STEP

S 08/09/25 (16)

14.0	D36513	Base
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Comment: Qty.: 1.0000 Each(s)/Unit Total: 4.0000 Each(s)

BASE

B 37165 (3)

B 41983 (5)

SB

15.0	MS20427M33	Rivet
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Comment: Qty.: 16.0000 Each(s)/Unit Total: 64.0000 Each(s)

Rivet

M 109371

128.000

FF 08/09/29

16.0	MS210603K	Nut Plate
------	-----------	-----------



Comment: Qty.: 8.0000 Each(s)/Unit Total: 32.0000 Each(s)

Nut Plate

M 108456 x 46 / M 109371 x 18

FF 08/09/29

17.0	CR3523401	RIVET
------	-----------	-------



Comment: Qty.: 57.0000 Each(s)/Unit Total: 228.0000 Each(s)

RIVET

M 107063 x 50 / M 109405 x 64

FF 08/09/30

18.0	SMALL FAB 1	SMALL & MEDIUM FAB RESOURCE 1
------	-------------	-------------------------------



Comment: SMALL & MEDIUM FAB RESOURCE 1

Assemble as per dwg D3651

FF 08/09/30  
FF 08/09/29

19.0	QC5	INSPECT WORK TO CURRENT STEP
------	-----	------------------------------



Comment: INSPECT WORK TO CURRENT STEP

S 08/09/30 (42)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FLANGE ASS'Y

Job Number: 40856

Part Number: D3651043

Job Number:



Seq. #:

Machine Or Operation:

Description :

20.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and stock

Location: GA

SB 08/09/30

21.0

QC21

FINAL INSPECTION/W/O RELEASE



08/10/02 HJ

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



MF 08-09-30

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries







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Handwritten text at the bottom of the page, possibly a footer or concluding remarks.





TRANSFER DRILL  $\varnothing 0.129$  (#30 DRILL)  
FROM D3651-5/-7 TO D3651-3  
INSTALL CR3523-4-02 OR NAS9307M-4-02  
RIVETS (57)

MS21060-3K NUTPLATE (1)  
MS20427M3-3 RIVET (2)  
(8 PLACES)

GTAW  
GRIND FLAT TO  
CLEAR FASTENERS  
(2 PLACES)

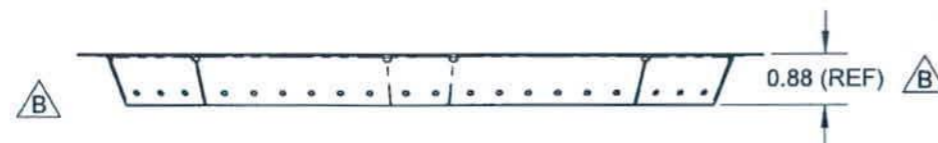
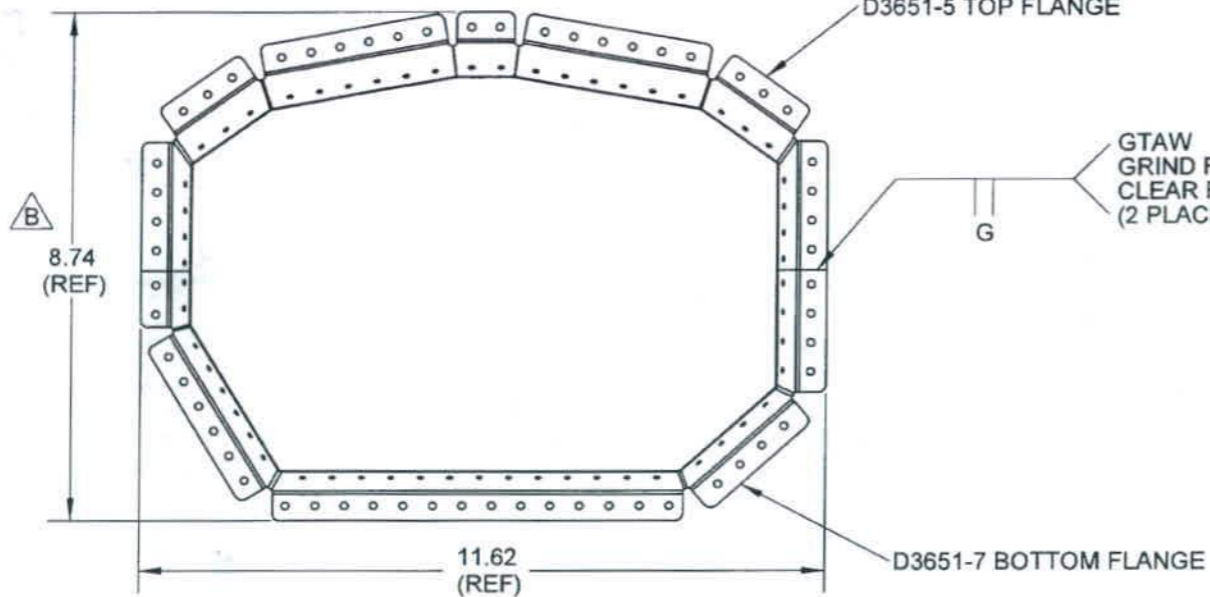
D3651-5 TOP FLANGE

D3651-7 BOTTOM FLANGE

D3651-5  
TOP FLANGE  
(REF)

D3651-7  
BOTTOM FLANGE  
(REF)

D3651-3  
BASE



### D3651-043 FLANGE WELDMENT

#### D3651-043 NOTES:

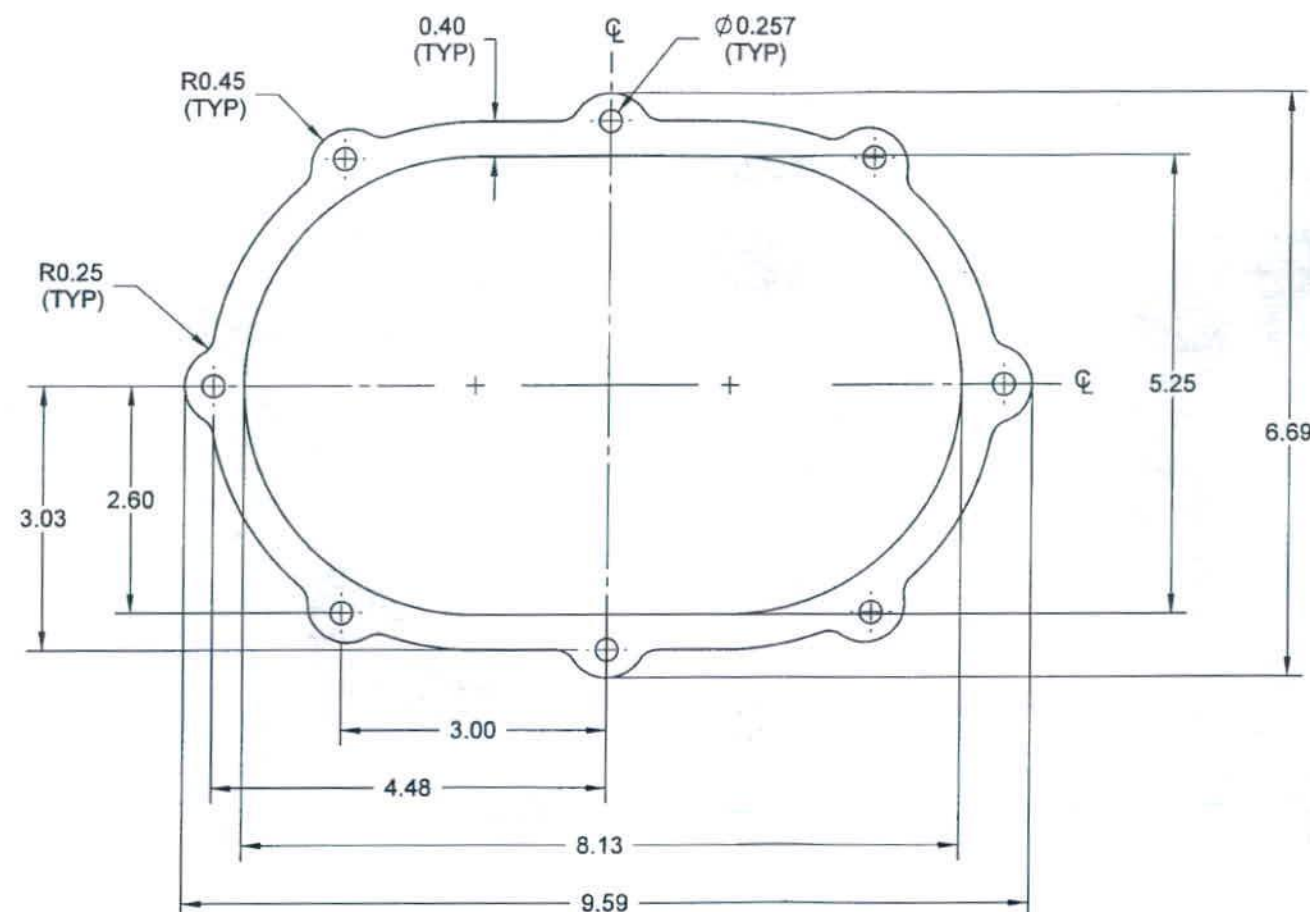
- 1) WELD PER QSI 004
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.76 lbs

QTY -043	PART NUMBER	DESCRIPTION
X	D3651-043	FLANGE WELDMENT
1	D3651-3	BASE
1	D3651-5	TOP FLANGE
1	D3651-7	BOTTOM FLANGE
16	MS20427M3-3	RIVET
8	MS21060-3K	NUTPLATE
57	CR3523-4-02 or NAS9307M-4-02	RIVET

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**D3651-1 GASKET**

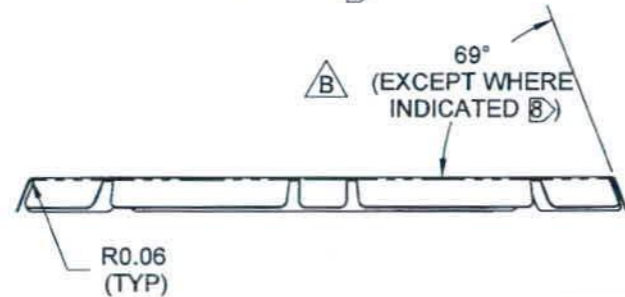
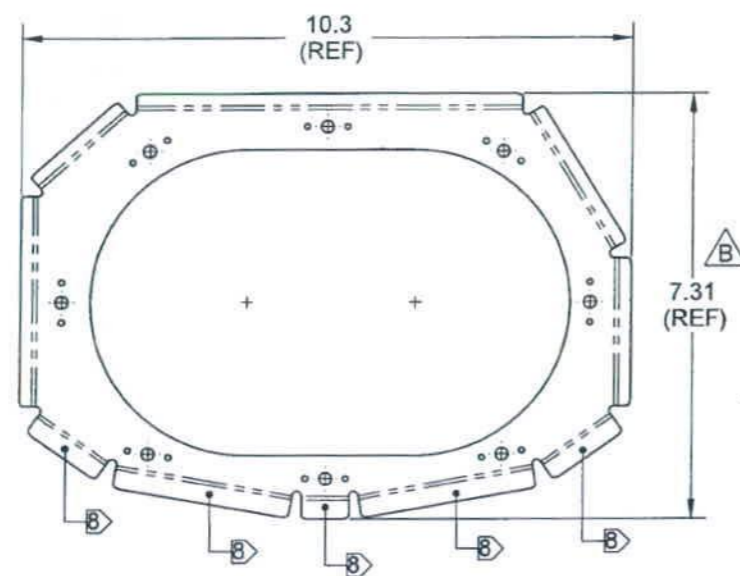
**NOTES:**

- 1) MATERIAL: THERMO-CHEM P/N G-89, (REF. 0.060 THICK)  
POSSIBLE SUPPLIER: A.R. THOMSON GROUP
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) PART IS SYMMETRIC ABOUT  $\phi$
- 8) WEIGHT: 0.09 lbs

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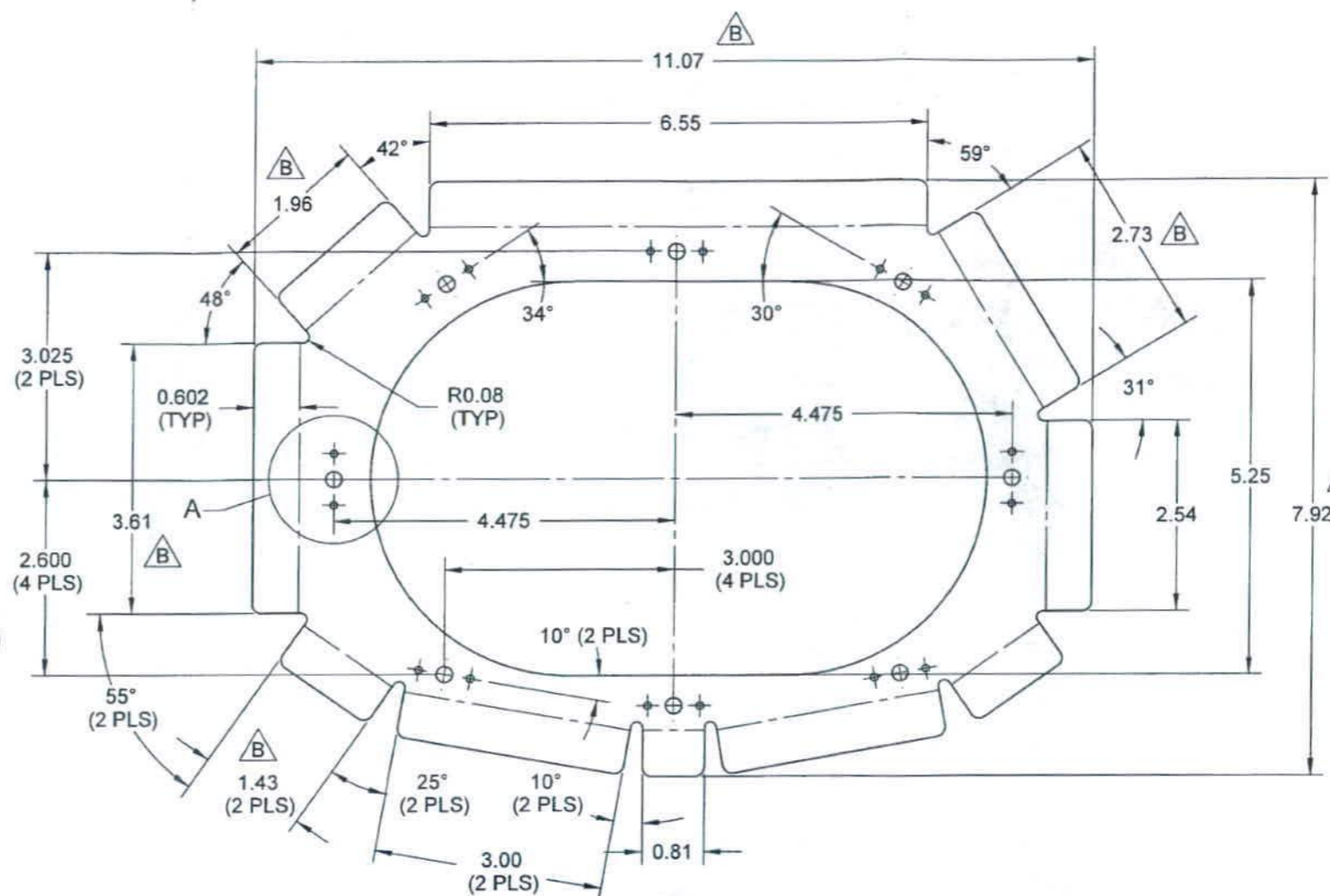




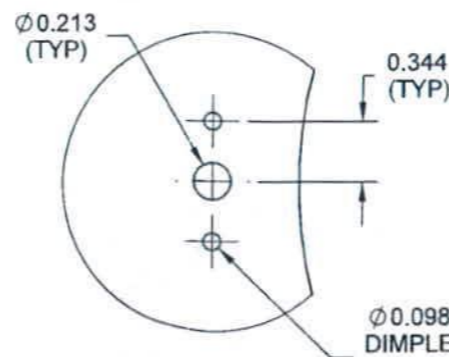
**D3651-3 BASE**  
(MAKE FROM D3651-3F FLAT PATTERN)

**NOTES:**

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL 0.018 (26 GAUGE) SHEET, PER MIL-S-5019 (REF. DART SPEC. M304S26GA)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.27 lbs
- 8) BEND TO 55° WHERE INDICATED



**D3651-3F FLAT PATTERN**

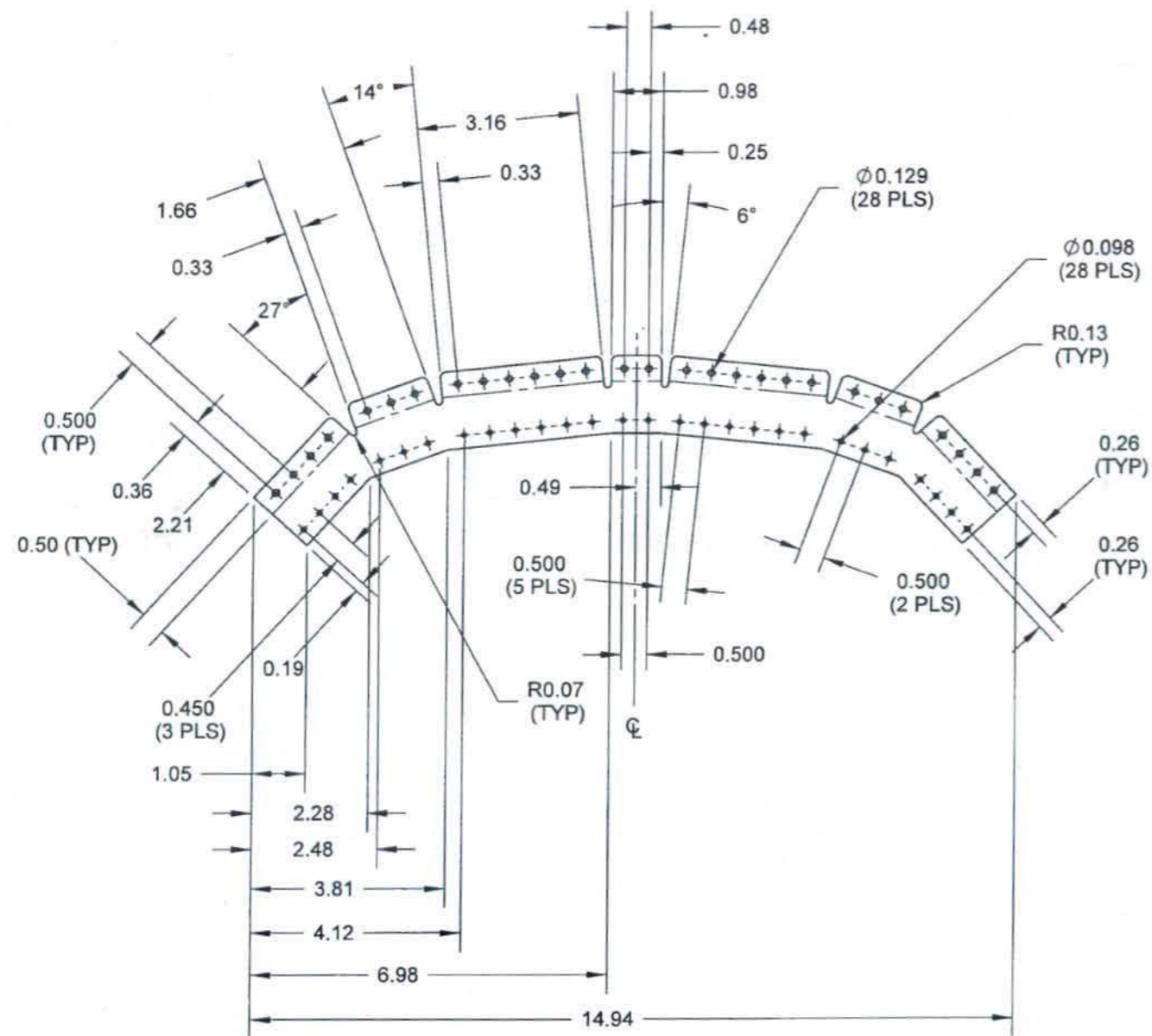


**DETAIL A**

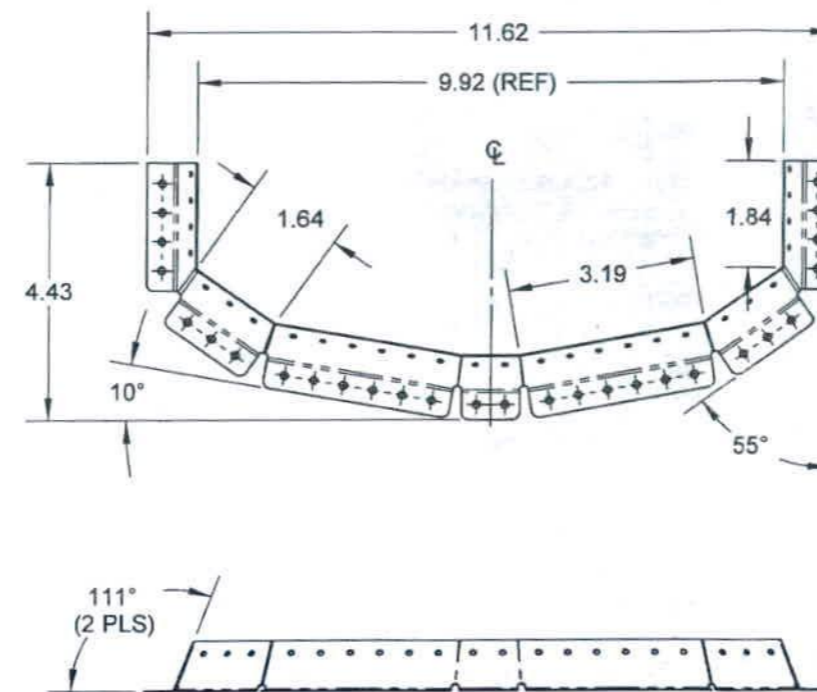
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**D3651-5F FLAT PATTERN**



**D3651-5 TOP FLANGE BEND DETAIL**  
(MAKE FROM D3651-5F FLAT PATTERN)

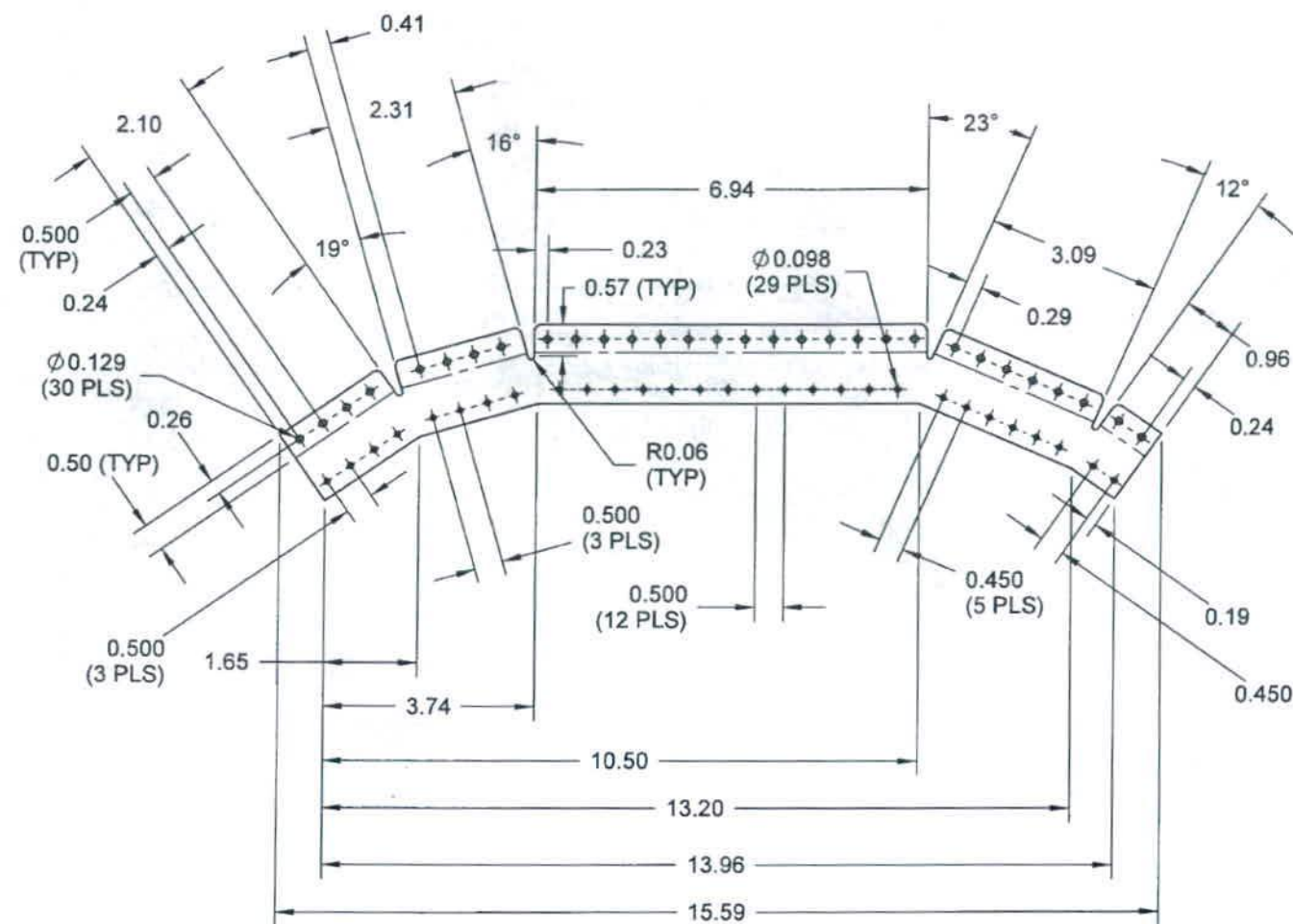
**NOTES:**

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL 0.018 (26 GAUGE) SHEET, PER MIL-S-5019 (REF. DART SPEC. M304S26GA)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.02 lbs

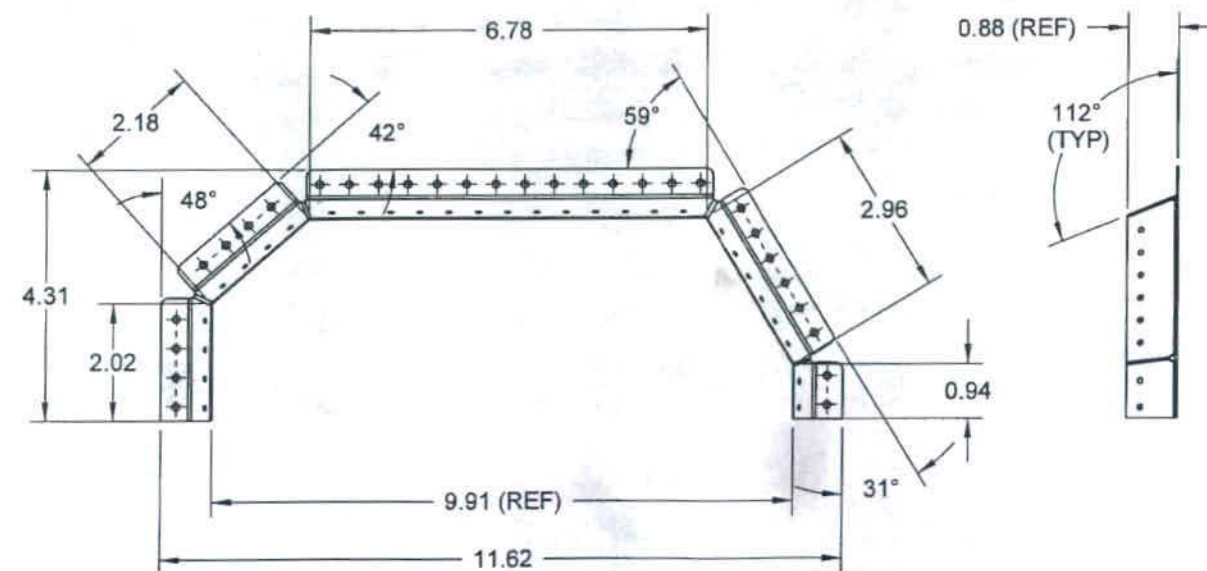
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**D3651-7F FLAT PATTERN**



**D3651-7 BOTTOM FLANGE BEND DETAIL**   
(MAKE FROM D3651-7F FLAT PATTERN)

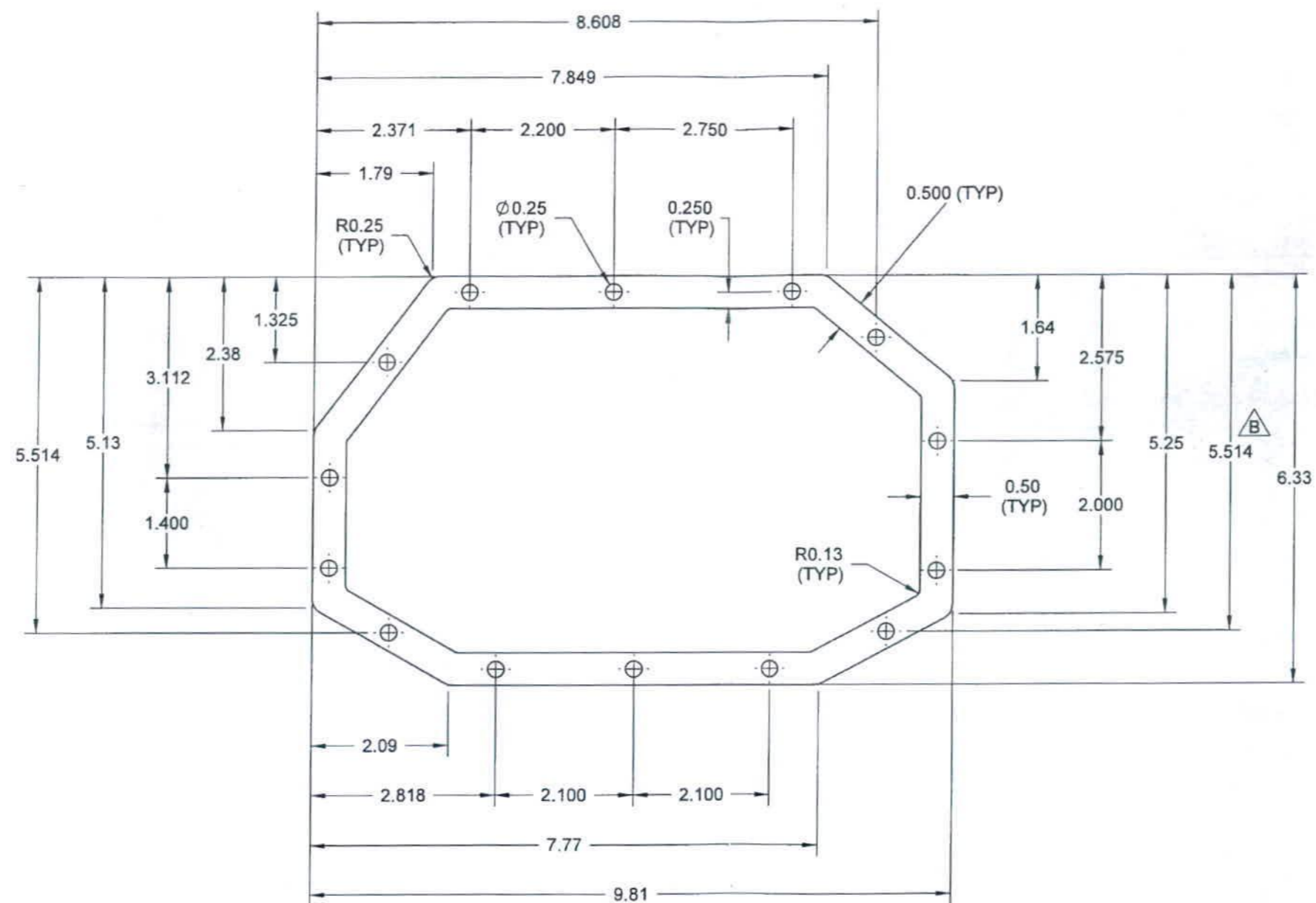
**NOTES:**

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL 0.018 (26 GAUGE) SHEET, PER MIL-S-5019 (REF. DART SPEC. M304S26GA)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.02 lbs

DESIGN	RF	<b>DART AEROSPACE LTD</b>	
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**D3651-9 INSIDE DOUBLER**

**NOTES:**

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL 0.018 (26 GAUGE) SHEET, PER MIL-S-5019 (REF. DART SPEC. M304S26GA)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.07 lbs

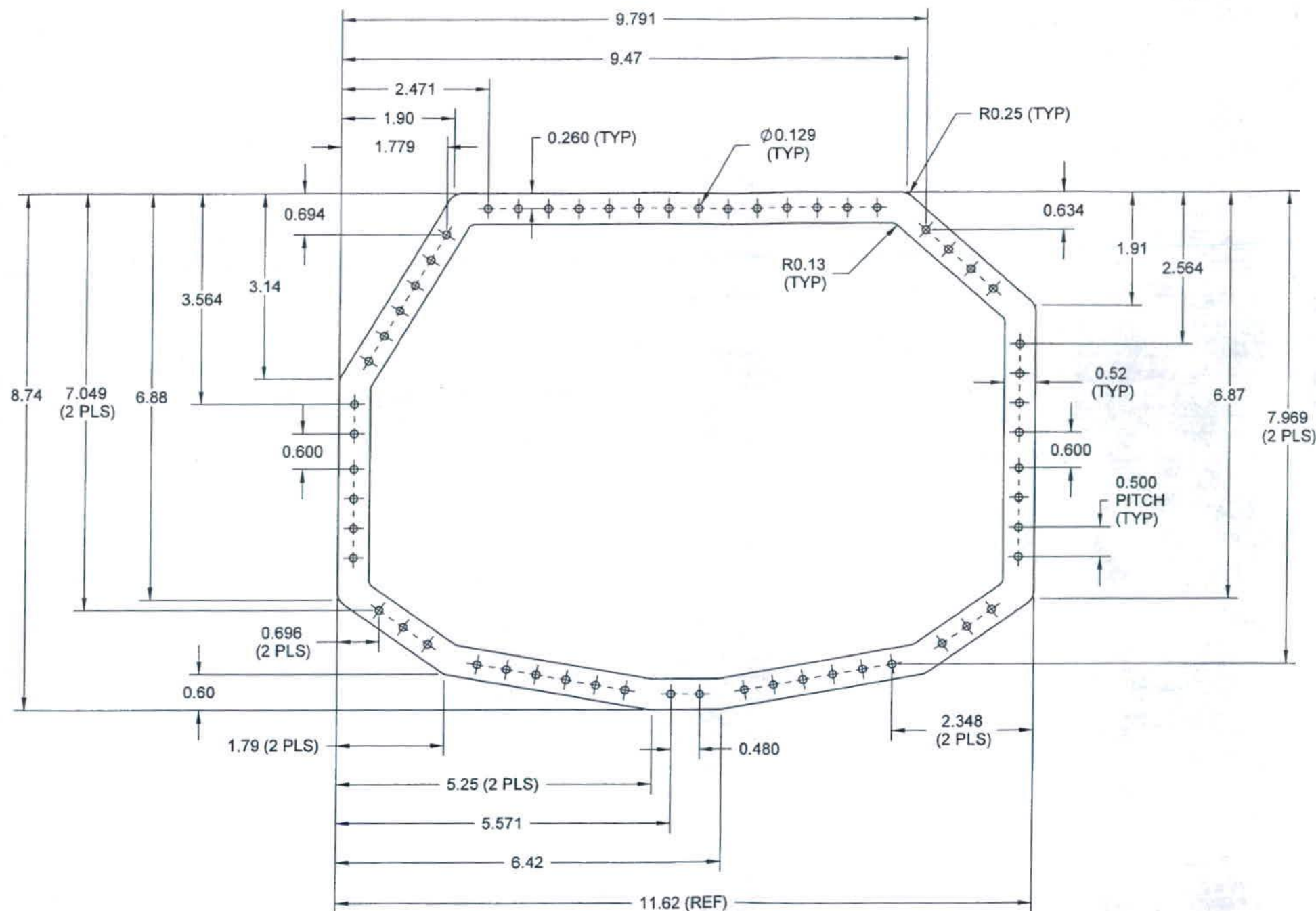
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**D3651-13 OUTSIDE DOUBLER** B

**NOTES:**

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL 0.018 (26 GAUGE) SHEET, PER MIL-S-5019 (REF. DART SPEC. M304S26GA)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.10 lbs

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